

Abstract of the Disclosure

Acentric lanthanide borate crystals having the general formula LnBO_3 , wherein Ln is Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, or Y, are disclosed along with a hydrothermal method for forming such crystals. The crystals possess unique optical, non-linear optical, laser, electronic and other physical properties and, therefore, are useful in a wide variety of photonic devices.